

T8-2 (4b)

Majme dané krivky:  $l_1 : \rho = 2 \cos \varphi, \varphi \in \left\langle -\frac{\pi}{2}, \frac{\pi}{2} \right\rangle$ ,

$$l_2 : (x-1)^2 + y^2 = 1$$

$$l_3 : x = 1 + \cos t; y = \sin t; t \in \langle 0, \pi \rangle,$$

$$l_4 : x = t; y = \sqrt{1-t^2}.$$

Nech  $s_i$  je dĺžka krivky  $l_i$ ,  $i = 1, 2, 3, 4$ . Potom platí:

a)  $s_1 = s_3 + \pi$ ,

b)  $s_1 = 2s_4$ ,

c)  $s_2 = s_1$ ,

d)  $s_2 = 2\pi$ .